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Atty. Dkt. No. 039153-0447 (G1152) 1756 \$

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Lukanc et al.

Title: METHOD OF EXTENDING THE  
AREAS OF CLEAR FIELD  
PHASE SHIFT GENERATION

Appl. No.: 10/016,439

Filing Date: 12/11/2001

Examiner: Nicole M. Barreca

Art Unit: 1756

<p><b>CERTIFICATE OF MAILING</b></p> <p>I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Commissioner for Patents, PO Box 1450, Alexandria, Virginia 22313-1450, on the date below.</p> <p>Sandra Murphy (Printed Name)</p> <p><i>Sandra Murphy</i> (Signature)</p> <p>October 30, 2003 (Date of Deposit)</p>
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**INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 CFR §1.56**

Commissioner for Patents  
PO Box 1450  
Alexandria, Virginia 22313-1450

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TC 1700

Sir:

Submitted herewith on Form PTO/SB/08 is a listing of documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR §1.56. A copy of each listed document is being submitted to comply with the provisions of 37 CFR §1.97 and §1.98.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* art reference against the claims of the present application.

11/05/2003 SDENBOB1 00000059 10016439

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**TIMING OF THE DISCLOSURE**

The listed documents are being submitted in compliance with 37 CFR §1.97(c), before the mailing date of either a final action under 37 CFR §1.113, a notice of allowance under 37 CFR §1.113, or an action that otherwise closes prosecution in the application.

**RELEVANCE OF EACH DOCUMENT**

All of the documents are in English.

Applicants respectfully request that any listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

**FEE**

A fee in connection with submission of a supplemental information disclosure statement under 37 CFR §1.97(c) in the amount of \$180.00 in accordance with 37 CFR §1.17(p) is attached.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 CFR §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 06-1447. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 06-1447.

Respectfully submitted,

Date 10-30-03

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Form PTO-1449  
(MODIFIED)U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO.

039153-0447 (G1152)

SERIAL NO.

10/016,439

## INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

APPLICANT

Lukanc et al.

FILING DATE

12/11/2001

GROUP ART UNIT

1756

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE
	A1	6,410,193	06/25/2002	Stivers et al.			
	A2	6,057,063	05/02/2000	Liebmann et al.			
	A3	6,013,399	01/11/2000	Nguyen			
	A4	5,861,233	01/19/1999	Sekine et al.			
	A5	5,780,187	07/14/1998	Pierrat			
	A6	5,641,593	06/24/1997	Watanabe et al.			
	A7	5,619,059	04/08/1997	Li et al.			

## FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION	
							YES	NO
	A10	EP 0 708 367 B1	01/14/1998	EPO			X	

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	A11	T. BRUNNER ET AL., "170 nm gates fabricated by phase-shift mask and top anti-reflector process," 182/SPIE Vol. 1927, Optical/Laser Microlithography VI, 1993, pps. 1-8.
	A12	KURT RONSE ET AL., "Comparison of various phase shift strategies and application to 0.35 $\mu$ m ASIC Designs," 2/SPIE Vol. 1927, Optical/Laser Microlithography VI, 1993, pps. 1-15.
	A13	J. M. CALVERT ET AL., "Projection X-Ray Lithography With Ultrathin Imaging Layers and Selective Electroless Metallization," Optical Engineering Vol. 32 No. 10, Oct. 1993., pp. 2437-2445
	A14	H. KYURAGI ET AL., "Synchrotron Radiation-Excited Chemical Vapor Deposition of Silicon Nitride Films from a SiH <sub>4</sub> + NH <sub>3</sub> Gas Mixture," Journal of the Electrochemical Society, Vol. 138 No. 11, Nov. 1991, pp. 3412-3416.
	A15	Y. MATSUI ET AL., "Low-Temperature Growth of SiO <sub>2</sub> Thin Film by Photo-Induced Chemical Vapor Deposition Using Synchrotron Radiation," Japanese Journal of Applied Physics, Part I, Vol. 31 n.6B, June 1992, pp. 1972-1978.
	A16	J. F. MOORE ET AL., "Deposition of Dielectric Thin Films by Irradiation of Condensed Reactant Mixtures," Materials Research Society Symposium Proceedings, Vol. 335, 1994, pp. 81-86.

EXAMINER

DATE CONSIDERED

\* **EXAMINER:** Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include any copy of this form with next communication to applicant.

Form PTO-1449 (MODIFIED)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. 039153-0447 (G1152)		SERIAL NO. 10/016,439	
<b>INFORMATION DISCLOSURE CITATION</b> (Use several sheets if necessary)				APPLICANT Lukanc et al.			
				FILING DATE 12/11/2001		GROUP ART UNIT 1756	
<b>U.S. PATENT DOCUMENTS</b>							
EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE
	A8	5,521,031	05/28/1996	Tennant et al.			
	A9	5,328,784	07/12/1994	Fukuda			
<b>FOREIGN PATENT DOCUMENTS</b>							
	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION YES NO
<b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>							
	✓ A17	I. NISHIYAMA ET AL., "Photon Energy Dependence of Synchrotron Radiation Induced Growth Suppression and Initiation in Al Chemical Vapor Deposition II. Surface Analysis by Auger Electron Spectroscopy," Applied Surface Science, Vol. 103, 1996, pp. 299-306					
	✓ A18	O. R. WOOD II ET AL., "Use of Attenuated Phase Masks in Extreme Ultraviolet Lithography," Journal of Vacuum Science and Technology B, Vol. 15, No. 6, Nov/Dec 1997, pp. 2448-2451					
	✓ A19	R. ZANONI ET AL., "Synchrotron-Radiation-Stimulated Tungsten Deposition on Silicon from W(CO) <sub>6</sub> ," Journal of Vacuum Science and Technology A, Vol. 9, No. 3, May/June 1991, pp. 931-934.					
	✓ A20	CHEN HL ET AL., "Simulation on a New Reflection Type Attenuated Phase Shifting Mask for Extreme Ultraviolet Lithography", Emerging Lithographic Technologies III, Santa Clara, CA, USA, 15-17 March 1999, Vol. 3676, pages 578-586, XP002230586, Proceedings of the SPIE - The International Society for Optical Engineering, 1999, SPIE - Int. Soc. Opt. Eng., USA.					
	✓ A21	U.S. Application Serial No. 09/772,577, entitled "PHASE SHIFT MASK AND SYSTEM AND METHOD FOR MAKING THE SAME" by Lukanc.					
<b>EXAMINER</b>				<b>DATE CONSIDERED</b>			
* <b>EXAMINER:</b> Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include any copy of this form with next communication to applicant.							